10th Class 2017

Math (Science)	Group-II	PAPER-II
Time: 20 Minutes	(Objective Type)	Max. Marks: 15

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- The solution set of equation $4x^2 - 16 = 0$ is:

(a) $\{\pm 4\}$ (b) $\{4\}$

(c) $\{\pm 2\}$ ✓   (d) ± 2

2- Cube roots of -1 are:

(a) $-1, -\omega, -\omega^2$ ✓   (b) $-1, \omega, -\omega^2$

(c) $-1, -\omega, \omega^2$ (d) $1, -\omega, -\omega^2$

3- If α, β are the roots of $x^2 - x - 1 = 0$, then product of the roots 2α and 2β is:

(a) -2 (b) 2

(c) 4 (d) -4 ✓

4- Find x in proportion $4 : x :: 5 : 15$:

(a) $\dfrac{75}{4}$ (b) $\dfrac{4}{3}$

(c) $\dfrac{3}{4}$ (d) 12 ✓

5- The third proportional of x^2 and y^2 is:

(a) $\dfrac{y^2}{x^2}$ (b) x^2y^2

(c) $\dfrac{y^4}{x^2}$ ✓   (d) $\dfrac{y^2}{x^4}$

6- The set having only one element is called:

(a) Null set   (b) Power set

(c) Singleton set ✓   (d) Subset

7- The different number of ways to describe a set is:

(a) 1   (b) 3 ✓

(c) 2   (d) 4

8- If $A \subseteq B$, then $A - B$ is equal to:

(a) A   (b) ϕ ✓

(c) B   (d) $B - A$

9- The extent of variation between two extreme observations of a data set is measured by:

(a) Range ✓   (b) Average

(c) Quartiles   (d) Median

10- $\frac{3\pi}{4}$ radian = ----- .

(a) 115°   (b) 150°

(c) 30°   (d) 135° ✓

11- The distance of any point of the circle to its centre is called:

(a) Diameter   (b) A chord

(c) Radius ✓   (d) An arc

12- Tangents drawn at the ends of diameter of a circle are ----- to each other.

(a) Parallel ✓   (b) Non-parallel

(c) Collinear   (d) Perpendicular

13- $\sec^2 \theta$ = ----- .

(a) $1 - \sin^2 \theta$ (b) $1 + \tan^2 \theta$ ✓

(c) $1 + \cos^2 \theta$ (d) $1 - \tan^2 \theta$

14- The portion of a circle between two radii and an arc is called:

(a) Sector ✓   (b) Segment

(c) Chord   (d) Diameter

15- How many common tangents can be drawn for two touching circles?

(a) 2   (b) 1

(c) 4   (d) 3 ✓